

# First record of an immature green turtle *Chelonia mydas* (Linnaeus, 1758) (Testudines: Cheloniidae) on a fluvial island, Reserva Biológica do Parazinho, Amazonas river, Brazil

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**ABSTRACT:** On March 8th, 2011 we recorded an immature green turtle *Chelonia mydas* at the Reserva Biológica do Parazinho, eastern Amazonia, Brazil. This record of *C. mydas* on a fluvial island, where the aquatic environment is a mixture of fresh and salt water, suggests that this typical marine species potentially tolerates lower levels of water salinity.

Green sea turtles *Chelonia mydas* (Linnaeus, 1758) are found circumglobally in the tropics (Pritchard 1996), are highly migratory (Hirth 1997), and forage in mixed aggregations drawn from various rookeries or nesting beaches (Luke *et al.* 2004; Bass *et al.* 2006). The carapace has various color patterns that change over time, but hatchlings have mostly black carapaces and light-colored plastrons. Carapaces of juveniles turn dark brown to olive, while those of mature adults are entirely brown, spotted, or marbled with variegated rays. Adult plastron is hued yellow (Marquez 1990). Currently, the conservation status of *C. mydas* is “endangered” because of population reduction levels (Peres *et al.* 2011; IUCN 2012).

On March 8<sup>th</sup>, 2011 we observed an immature green turtle in the Reserva Biológica do Parazinho (Figure 1). The specimen had total length of 42.5 cm and was stranded live near creeks in low tide. The specimen was photographed and released. This is the first record of *Chelonia mydas* on a fluvial island. It was an opportunistic record during field activities in the project “Reproductive biology of *Podocnemis expansa* (Podocnemididae)”, under the authorization number 03/2010 from the Secretaria Estadual do Meio Ambiente do Amapá.

The Reserva Biológica do Parazinho (00°52'30" N, 49°59'15" W) is a strictly protected area (biological reserve, as defined by the Brazilian environmental laws; see Rylands and Brandon 2005) and it is part of the archipelago Bailique, in the municipality of Macapá, state of Amapá (Figure 2). Flat areas with clay, silt, and sand, with both river and sea origins, characterize the relief. As the humidity is under constant influence from the Amazonas river and the Atlantic ocean, it has marine and resting formations features subject to periodic flooding, as well as a constant load of sediment (Santos *et al.* 2004; Drummond *et al.* 2008).

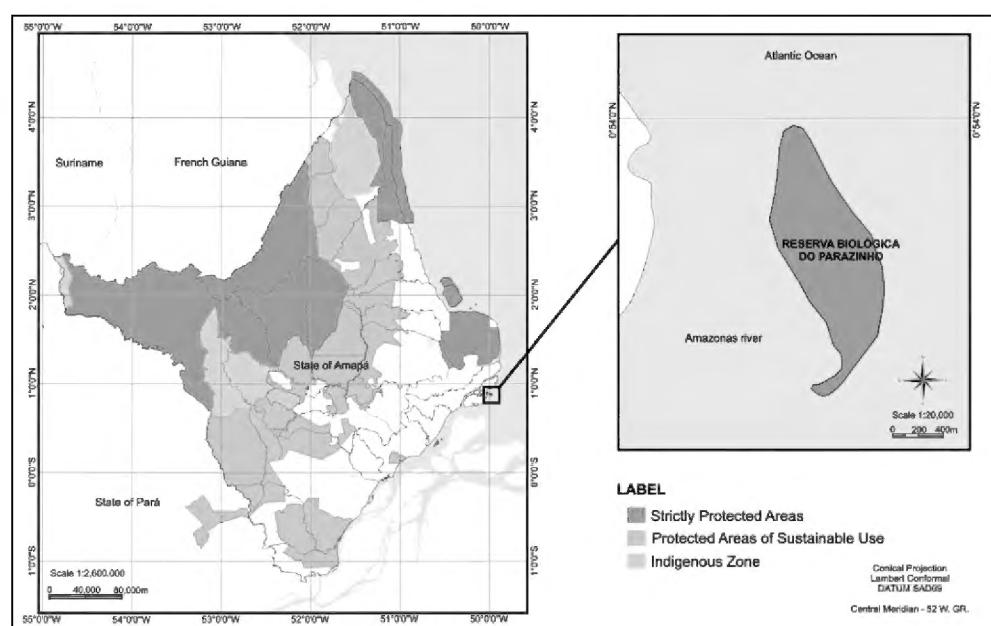
Reproductive areas of *Chelonia mydas* in Brazil are usually restricted to oceanic islands, such as Trindade

(Moreira *et al.* 1995), Atol das Rocas (Bellini *et al.* 1996; Grossman *et al.* 2007) and Fernando de Noronha (Bellini and Sanches 1996). In addition, minor spawning areas also occur on the northern coast of Bahia state and occasionally in Espírito Santo, Sergipe and Rio Grande do Norte states (Almeida *et al.* 2011). Non-reproductive records of sea turtles (juveniles, sub-adults and adults) refer to occurrences not recorded during the reproductive seasons. In general, these records include dead specimens found on the beaches, and turtles caught in fishing traps (gill netting; see Marcovaldi and Marcovaldi 1999; Salet *et al.* 2008). The non-reproductive records of turtles, especially of juveniles, usually occur in the continental coast and oceanic island (Sales *et al.* 2007, Proietti *et al.* 2009). This record of *C. mydas* on a fluvial island, where the aquatic environment is a mixture of fresh and salt water, suggest that this typical marine species potentially tolerates lower levels of water salinity than previously



**FIGURE 1.** Juvenile *Chelonia mydas* recorded in March 2011, out of the reproductive season, at Reserva Biológica do Parazinho, Amazonas river, municipality of Macapá, state of Amapá, eastern Amazonia, Brazil. Photo by Rafael Cabral dos Santos.

thought (Hirth 1997). We did not test such hypothesis, but if confirmed, this tolerance could allow migrations among populations through coastal routes, including estuarine areas (Naro-Maciel *et al.* 2007). If so, *C. mydas* could migrate without going offshore to overcome these less-salty estuarine areas (Hirth 1997).



**FIGURE 2.** Localization of the Reserva Biológica do Parazinho, eastern Amazonia, Brazil, after Drummond *et al.* (2008).

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